

### REMARKS

This amendment is being filed along with a Request for Continued Examination (RCE) in response to the final Office Action mailed June 13, 2008. Claims 1-39 were previously canceled without prejudice. Various claims are amended as shown. New claims 62-64 have been added. No new matter has been added to the application. With this amendment, claims 40-64 are pending in the application.

#### I. List of cited references

Upon further review of the prosecution history of the present application, it has been discovered by the attorney of record (Dennis M. de Guzman) that there is a missing (unlisted) reference in the Notice of References Cited (form PTO-892), which was mailed by the U.S. Patent Office along with the non-final Office Action of November 2, 2007. In particular, Rubin (U.S. Patent No. 6,232,878) was cited and relied upon in the previous non-final Office Action of November 2, 2007 as a grounds of rejection. However, the accompanying form PTO-892 did not list this Rubin patent (U.S. Patent No. 6,232,878), but instead listed Rubin's corresponding divisional patent (U.S. Patent No. 6,359,562), hereinafter referred to as "Rubin '562."

It is kindly requested that an updated form PTO-892 be provided by the U.S. Patent Office along with the next communication, so as to ensure that Rubin (U.S. Patent No. 6,232,878) is appropriately listed on the front page of the to-be-issued patent as a reference on record that was " \* cited by Examiner".

#### II. Rejections under 35 U.S.C. § 112, first paragraph

The final Office Action has rejected claims 40, 45, and 61 under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement. Specifically, page 2 of the final Office has alleged that the "un-modulated" return signal recited in these claims was "not defined in the specification" and "was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention."

For the reasons set forth below, these written description rejections are respectfully traversed.

MPEP § 2163.02 states the following with regards to the written description requirement:

“[T]he fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed. See, e.g., *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). An applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997).”

It is respectfully submitted that the specification conveys with reasonable clarity to those skilled in the art that the applicant was in possession of the claimed invention (of claim 40 for example) that involves emission of a varying wideband signal to enable a tag element to transmit an un-modulated return signal, in a manner that describes the claimed invention with all of its limitations “using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention.”

For example, Figures 7B and 7C illustrate non-limiting and non-exhaustive examples of the tag signal. More specifically, Figures 7B and 7C show the tag signal as having the form/shape generally of a non-periodic sinusoidal waveform that decreases in amplitude over time  $t$ . Such a decrease in amplitude of the “sinusoidal components” of the tag signal is described in paragraph [0037] of the publication of the present application as a “resonance decay.” Paragraph [0024] further describes the tag signal of Figure 7B as a “narrow” return signal, thereby providing further description of the rapid decay of the tag signal over time  $t$ . Such a decaying sinusoidal waveform is commonly referred to as a “sinc” waveform.

As is known, a sinc waveform has the following Fourier transform (from the time domain  $t$  to the frequency domain  $\omega$ ):

$$\text{sinc}(A \cdot t) \Leftrightarrow (\pi / A) \cdot \Pi(\omega / 2A)$$

The symbol  $\Pi$  in the Fourier transform above denotes a rectangular or “gate” function, which is a function that is centered about and that includes the 0 frequency component (DC component) and has a narrow bandwidth defined by the “gate” shape. The gate function thus generally approximates the shape of a low pass filter. Paragraph [0075] of the publication of the present application is consistent with this concept, by describing a Bessel “low pass filter” 304 that is used to detect the tag signal.

Next, the online dictionary available at [http://www.computeruser.com/resources/dictionary/get\\_by\\_index/b/320/](http://www.computeruser.com/resources/dictionary/get_by_index/b/320/) describes a “baseband signal” as follows:

“Baseband signal is a signal with frequency content centered around DC. Typically it is the modulating signal for an RF carrier.”

The online dictionary at <http://scienceworld.wolfram.com/physics/BasebandSignal.html> defines a “baseband signal” as: “A signal which has frequencies from 0 to some band-limited value  $B$ .” Still further, the online dictionary at <http://encyclopedia2.thefreedictionary.com/Baseband+signal> defines “baseband” as follows:

“Electronic data prior to any modification. It refers to analog or digital data before they are merged with other signals (multiplexed) or intermixed into a carrier wave (modulated).”

In view of the above, the example “narrow” return/tag signal (a time-domain sinc waveform that includes the 0 frequency component and is of narrow frequency bandwidth)

disclosed by the present application can thus be considered as a “baseband” signal according to the above resources. As explained above, baseband involves “data before they are ... intermixed into a carrier wave (modulated).”

Accordingly, it is therefore respectfully submitted that the specification conveys with reasonable clarity to those skilled in the art that the applicant was in possession of the claimed subject matter that involves emission of a varying wideband signal to enable a tag element to transmit an “un-modulated” return signal.

As further support that written description requirements have been met, paragraphs [0057], [0058], and [0079] of the publication of the present application describe the components of the tag that receives the varying wideband signal. In the described embodiments, the electrical/electromagnetic components of these tag(s) include a ferrite rod, a coil, a capacitor, and a diode. Modulating circuitry (to provide a modulated return signal) are not shown and described in the disclosed embodiments of the tag. In response to excitation by the varying wideband interrogation signal, the tag produces magnetic field lines (Figure 9A) that are detected by the detector. It is respectfully submitted that a person skilled in the art would recognize that the ferrite rod, coil, and related components of the disclosed embodiments of the tag are not capable of producing a modulated return signal.

There is thus additional written description support for an “un-modulated” return signal.

### III. Discussion of the claims and cited references

The final Office Action has rejected claims 40, 44-46, 50-53, 58, 60, and 61 under 35 U.S.C. § 103(a) as being unpatentable over Blair (U.S. Patent No. 6,026,818) in view of Rubin ‘562. Claims 41, 47 and 55 are rejected as being unpatentable over Blair in view of Rubin ‘562 and further in view of Pauly (U.S. Patent No. 6,349,234). Claims 42, 48 and 56 are rejected as being unpatentable over Blair in view of Rubin ‘562 and further in view of Lewiner (U.S. Patent No. 4,893,118). Claims 43, 49 and 57 are rejected as being unpatentable over Blair in view of Rubin ‘562 and further in view of Chung (U.S. Patent No. 6,696,954). Claim 59 is rejected as being unpatentable over Blair in view of Rubin ‘562 and further in view of Hossack (U.S. Patent No. 5,928,151).

It is noted that the final Office Action has not set forth grounds of rejection for claim 54.

For the reasons set forth below, the rejections set forth in the final Office Action are respectfully traversed.

A. Dependent claims 43, 49, and 57

Dependent claims 43, 49, and 57 are amended herein to recite, *inter alia*, that the three mutually orthogonal rings are arranged on a “wand.” Support for this amendment can be found, for example, in Figure 3B, in paragraphs [0032] and [0038], and elsewhere in the publication of the present application. It is respectfully submitted that the references do not meet the recited claim limitations that require the rings to be arranged on a wand.

For example, page 6 (section 7) of the final Office Action has admitted that Blair and Rubin ‘562 fail to disclose the recited three mutually orthogonal rings. To supply the missing teachings of Blair and Rubin ‘562, the final Office Action relies upon Chung. However, it is respectfully submitted that Chung does not cure the deficiencies of Blair and Rubin ‘562.

In particular, Chung’s antennas are not arranged on a wand as required by claims 43, 49, and 57. Rather than a wand, Chung’s antennas are arranged on/in a “portal or passageway or other detection region.” Chung provides the following description in his Abstract and in his column 2, line 66 to column 3, line 30:

“An antenna array comprises a plurality of antenna loops disposed to define a portal or passageway or other detection region in which the plural antenna loops transmit and/or receive electromagnetic signals ... FIG. 2 is an isometric view schematic diagram of an exemplary detection portal 10 including an optional physical portal 20 and an antenna array 30, in accordance with the invention. Portal 20 is an exemplary rectangular portal 20 includes four sides, for example, top 21, bottom 23, and sides 22 and 24, defining a passage 25 therethrough. While portal 20 may be square for certain applications, for example, providing a typical about 3-foot by 3-foot (about 0.9 meter by 0.9-meter) square passage through which

objects such as baggage is moved by conveyor at an airport, it is generally rectangular for most applications such as doorways and the like, notwithstanding that sides 21-24 may be bowed or arched for aesthetic or other reason or may be provided by a building or other structure that support antenna array 30.”

Thus from the above-quoted passages of Chung, it is abundantly clear that he arranges his antennas on the sides of a building, portal/doorway, or other fixed/non-movable structure so as to enable objects passing therethrough (such baggage on a conveyor belt) to be detected. Chung shows such a structure (*e.g.*, a portal) in his Figure 2.

In contrast, the embodiments of the rings arranged on a wand, such as disclosed in the present application in paragraph [0032], “is adapted to be hand-held and thus lightweight. This obviates the need for special ... room adaptations, with detection equipment, as utilized in some prior art embodiments. The detector of the present invention is accordingly portable and movable.”

In view of the above, it is respectfully submitted that claims 43, 49, and 57 are allowable.

B. New dependent claims 62-63

New dependent claims 62 and 63 respectively recite, *inter alia*, that the varying wideband interrogation signal has a “randomly varied frequency” and that the frequency of the varying wideband interrogation signal is randomly varied by “alteration of a time interval between successive drive pulses.” Support for these limitations can be found, for example, in paragraphs [0053] and [0073] and elsewhere in the publication of the present application. It is respectfully submitted that the cited references do not meet the limitations of claims 62-63.

For example, page 4 (section 2) of the final Office Action admitted that Blair does not disclose a varying wideband signal.

Page 4 (section 2) of the final Office Action has interpreted Rubin ‘562 as teaching “wherein when the interrogation (via transmission system 10) transmits an interrogation signal the frequency of the alternating electrical signal varies in accordance with a numerical

frequency control signal.” Rubin ‘562 explains in column 6, lines 3-21 that “the numerically controlled oscillator 416 generates an alternating electrical signal in which ... the frequency varies in accordance with the frequency of the control signal ... variable frequency oscillators, having the frequency of the output restricted to a sub-multiple of a substantially fixed clock frequency, such as ‘divide-by-N’ frequency synthesizers, may be used as the numerically controlled oscillator 416 ...” Thus, it is respectfully submitted that the signal of Rubin ‘562 is not “randomly” varied as required in claims 62-63, since he relies upon a “fixed” clock frequency (or predetermined/known multiples N thereof) to control the frequency of his electrical signal.

Page 5 (section 5) of the final Office Action has interpreted Pauly as teaching “pulse-width modulation (PWM), frequency shift keying (FSK).” Further, page 6 (section 6) of the final Office Action has interpreted Lewiner as teaching “a voltage-modulated signal.”

It is respectfully submitted that these references’ transmitters that transmit the above-identified types of signals (the electrical signal varied in accordance with a numerical frequency control signal, the PWM and FSK signals, the voltage-modulated signal) do not meet the limitations of a first electronic circuit that emits a varying wideband interrogation signal having a “randomly varied” frequency (claim 62) and/or wherein the frequency of the varying wideband interrogation signal is randomly varied by alteration of a time interval between successive drive pulses (claim 63).

Hence, claims 62-63 are allowable.

C. Independent claim 40

Independent claim 40 as amended herein recites, *inter alia*, a first electronic circuit “adapted to emit a varying wideband interrogation signal to energize said tag element to enable said tag element to transmit at least one un-modulated return signal” The final Office Action has alleged that claim 40 is rendered obvious by the combination of Blair and Rubin ‘562. This allegation of obviousness by the final Office Action is respectfully traversed herein.

The Federal Circuit has held many times that to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be

considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The Federal Circuit has further held many times that the Examiner must provide objective evidence of a motivation for combining the teachings of cited references in the manner claimed. *E.g.*, *In re Sang-Su Lee*, 277 F.3d 1338, 1343; 61 USPQ2d 1430, 1433 (Fed. Cir. 2002) (copy enclosed). Further, “this factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority.” *Id.* at 277 F.3d 1343-1344; 61 USPQ2d 1433.

The recent U.S. Supreme Court case, *KSR Int’l Co. v. Teleflex, Inc.*, does not change the requirement for the Examiner to provide such evidence of motivation. 127 U.S. 1727, 1740-41 (U.S. 2007). The Supreme Court also stated that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. *Id.*, citing *United States v. Adams*, 383 U. S. 39, 40 (1966). In addition, the cited references must support all of the limitations of a claim in order to support a rejection based on obviousness. *In re Thrift and Hemphill*, 298 F.3d 1357, 1366 (Fed. Cir. 2002).

Furthermore, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

It is respectfully submitted that the attempt by the final Office Action to combine Blair with Rubin ‘562 goes against the accepted doctrines set forth above.

The present application and Blair disclose that the interrogation signal is “wideband,” and further disclose that use of the wideband interrogation signal is useful in detecting low-Q tags that emit a weak return signal that would otherwise be difficult to differentiate from noise. Blair teaches the following in his column 5, lines 1-20:



“The tag emits a small response signal, of general but not specifically known frequency, which would normally not be readily detectable because of its weak strength and non-predetermined nature. However, in accordance with the present invention, the signal emitting detection device comprises pulsed signal emitting means which cover a signal range which includes that of the tag. The pulsed signals trigger a continuing response signal from the tag, in its single frequency, which increases in a very narrow band to a point where it becomes differentiated from background noise and it is detected within the wideband range by the signal detector, as an indication of the presence of the tag. Since the precise frequency of the signal response is not necessary or even pre-determined, expenses in electronics for emission and detection are also minimized. Because of the immediate turn off of the signal during pulses the tag return signal is very quickly located (on the order of microseconds instead of milli-seconds, from transmitter turn-off) and even a low Q tag is utilizable as opposed to the high Q tags required in the prior art.”

The publication of the present application discloses the following in paragraphs [0067] and [0074]:

“[0067] The return signal 71, shown in FIG. 7B, which commences with the shut off of the transmit signal 70 (see FIG. 7A), rises in intensity (e.g., magnitude) to a level easily distinguishable from the background noise 72 as the detector nears the tag thereby facilitating detection of the location of the surgical sponge (or other object) attached to the tag, for example, by triggering an audio and/or visual alarm. This is because the tag element is excited using a low Q wideband transmitter. Although this may be considered a less efficient forward energy transfer approach, it does have the ability to clamp the transfer decay rapidly and allow the tag signal to be seen earlier in its return decay. In effect, this works because the tag

signal can be seen (processed) out of the noise floor, which is reduced by application of a wideband transmitter/receiver device. An explanatory illustration of this including a comparison showing between that of a wideband decay and narrow band high Q excitation is shown in FIG. 7C ... [0074] Traditional RFID, on the other hand, is based on a electromagnetic coupling of specific frequency signal between a transmitter-receiver and tags operating at a resonant frequency. During transmit cycles the tags are excited, and then ring back a return signal post transmission. Typically, the transmitter is tuned tightly (e.g. within 3%) of the center frequency and is designed to have a high 'Q' or power transfer. Likewise, tags are also designed to have the highest Q and tightest control of center frequency possible. This approach is unfortunately, limiting in range, as the tag coupling area (size) is substantially reduced. In practice, detection of 2 mm sized rod tags, typically, are limited to 6" or less operating ranges with most systems. The problem is the tag response energy (for tags with small area of coupling) is often time undetectable in the midst of the ambient background noise of the transmitter energy decay cycle."

Thus, the above-quoted passages teach that the use of the "wideband" interrogation signal provides better performance/discrimination of the tag signal against noise, as compared to a "narrow band high Q excitation." Also as explained above, use of the wideband interrogation signal permits a "low Q tag" to be used, as opposed to the high Q tags required in the prior art. Moreover, "expenses in electronics for emission and detection are also minimized," since for example the transmitter (emitting the wideband interrogation signal) no longer needs to be "tuned tightly" to the center frequency of the tag.

It is respectfully submitted that the above features teach against making a combination with Rubin '562.

Rubin '562 teaches an electronic article security (EAS) system that requires the transmitter to send an interrogation signal at a predetermined and narrow frequency range, so as

to encompass as closely as possible the known center frequency (8.2 MHz or minor variations thereof) of the tags. Rubin '562 teaches the following in column 1, lines 48-65:

“[T]he frequency of the output signal is swept up and down at a predetermined sweep rate within a predetermined frequency range generally surrounding the resonant frequency of the tags employed. . Typically, the output frequency is swept between a low frequency of 7.2 MHz. and a high frequency of 9.2 MHz. and thus has a bandwidth of 2.0 MHz. and a center frequency of 8.2 MHz. Security tags typically employed with the EAS system have a resonant frequency of 8.2 MHz. but may vary upwardly or downwardly due to a variety of factors including manufacturing tolerance, environmental conditions, etc. By sweeping through a band on both sides of the tag nominal resonant frequency, the EAS system compensates for such tag variations and is able to reliably detect a high percentage of all security tags.”

Rubin '562 thus teaches using a narrowband (rather than a wideband) interrogation signal. In fact, Rubin '562 explicitly teaches against using a wideband interrogation signal in his system, since a larger bandwidth results in decreased reliability in his system (*e.g.*, increased false positives). Rubin '562 describes the following in his column 2, lines 20-44:

“Current EAS system transmitters typically use voltage controlled oscillators (VCOs) employing varactor diodes as variable capacitor elements to enable the frequency of the voltage controlled oscillator to be swept between the low and high limits. The nature of varactor diodes results in instability of the frequency of the voltage controlled oscillator output signal and also results in a non-linear frequency sweep characteristic. From a security tag testing perspective, the frequency instability of the transmitted signal adds uncertainty in measuring the

resonant frequency of the tag being tested. From an EAS system operating perspective, VCO instability requires the EAS transmitter to sweep over an even larger bandwidth to compensate for the VCO instability or alternatively, forces narrower production limits on the tag resonant frequency. In the former case, the frequency instability of the transmitted signal reduces the reliability of [tag] detection since the acceptance limits of the received signal must be made larger. In the latter case, narrower production limits on tag resonant frequency increases the tag reject rate and thus costs. Also, the non-linear sweep characteristic of the frequency sweep has undesired effects, principally in reducing the probability of detection, increasing the false alarm rate and increasing the out-of-band emissions.”

In view of the above, it is respectfully submitted that there is a teaching against combining the wideband interrogation as taught by Blair with the narrowband interrogation as taught by Rubin ‘562. As explained above, the Supreme Court has stated that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. *KSR Int’l Co. v. Teleflex, Inc.*, supra, citing *United States v. Adams*, 383 U. S. 39, 40 (1966).

Moreover, it is respectfully submitted that the modification of Blair to implement the narrowband interrogation signal of Rubin ‘562 would render the thus-modified Blair unsatisfactory for its intended purpose. *In re Gordon*, supra. As previously explained above, Blair uses the wideband interrogation signal in order to obtain better discrimination of the tag signal against noise. However, a narrowband interrogation signal (as taught by Rubin ‘562) used in the modified Blair would be “... limiting in range, as the tag coupling area (size) is substantially reduced. In practice, detection of 2 mm sized rod tags, typically, are limited to 6" or less operating ranges with most systems. The problem is the tag response energy (for tags with small area of coupling) is often time undetectable in the midst of the ambient background noise of the transmitter energy decay cycle.” For example, Figure 7C of the publication of the present application demonstrates that rapid decay of the transmitter energy is not obtained by using

narrow band excitation, thereby increasing the difficulty in discriminating the tag signal from noise. Accordingly, it is respectfully submitted that there is no motivation or suggestion to make the proposed modification, and/or the proposed modification would change the principle of operation of Blair and so the teachings of the references are not sufficient to render claim 40 *prima facie* obvious. *In re Ratti*, supra.

Hence, claim 40 is allowable.

D. Independent claim 44

Independent claim 44 recites, *inter alia*, a first electronic circuit adapted to emit a “varying wideband interrogation signal” to build energy in the tag element to enable the tag element to transmit at least one return signal. As previously explained above, such a feature of a varying wideband interrogation signal is not rendered obvious by the combination of Blair and Rubin ‘562. Hence, claim 44 is allowable.

Moreover, claim 44 further recites, *inter alia*, a second circuit adapted to “discriminate said at least one return signal from noise.” It is respectfully submitted that discrimination of the return signal from noise, by using a varying wideband interrogation signal, is not taught by the cited references.

Page 4 (section 2) of the final Office Action has admitted that Blair fails to disclose a “varying” interrogation signal. To supply this missing teaching of Blair, the final Office Action relies upon Rubin ‘562. However, Rubin ‘562 does not supply the missing teachings of Blair.

As disclosed in paragraphs [0053] and [0071] of the publication of the present application, varying the interrogation signal increases the signal to noise ratio, by for example, causing noise to become out-of-phase with the tag resonance:

“[0053] A fixed repetition rate of putting out pulse sequences to excite tags may be susceptible to continuous wave noise (i.e., signals close to the tag frequency). Accordingly, in a further embodiment, the pulse signal frequency is varied in random fashion to make it very difficult for continuous wave noise to affect the system, since it will become very out

of phase with the tag resonance. This is similar to a spread spectrum approach in frequency hopping ... [0071] To further increase the signal to noise ratio, the pulse generator 30 is implemented in such a fashion as to modulate the transmitted pulses. In one embodiment, for example, multiple drive voltage levels are used. The voltage levels of the pulses are varied over time..."

In comparison, Rubin '562 teaches that he varies the frequency so as to determine the "Q" and resonant frequency of each tag. He is completely silent as to varying his interrogation signal in order to improve the signal to noise ratio. Rubin '562 teaches the following in his column 7, lines 14-20:

"By activating the receiver 18 during each quiescent period and varying the frequency of the output of the NCO 416 over the expected range of the resonant frequency of the tag 14, the resonant frequency and 'Q' of the tag 14 may be determined by measuring the amplitude of the output of the receiver 18 for each burst."

Accordingly, it is respectfully submitted that Rubin '562 does not teach varying an interrogation signal so as to enable the tag to transmit a return signal that is discriminated from noise. "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, supra.

Hence, claim 44 is further allowable.

E. Independent claim 52

Independent claim 52 recites, *inter alia*, a first electronic circuit adapted to emit a "varying interrogation signal" to provide energy to a tag element to enable the tag element to transmit at least one return signal, and a second electronic circuit adapted to detect whether the tag element is present from a detected magnitude of the return signal that is "above a noise level." It is respectfully submitted that these limitations are not met by the cited references.

For example and as previously explained above, there is no motivation to combine Blair and Rubin '562. Moreover, Rubin '562 does not teach varying an interrogation signal so as to enable the tag to transmit a return signal having a magnitude above a noise level.

Hence, claim 52 is allowable.

F. New dependent claim 64

New dependent claim 64 recites, *inter alia*, that the “wideband interrogation signal is varied by said first electronic circuit so as to increase a signal to noise ratio.” As previously explained above, the final Office Action has admitted that Blair does not teach varying an interrogation signal, and Rubin '562 does not teach varying an interrogation signal so as to increase a signal to noise ratio.

Accordingly, claim 64 is allowable.

VI. Supplemental information disclosure statement (IDS)

A supplemental IDS is being filed herewith to submit additional references. Because this supplemental IDS is being filed along with the present RCE, an IDS fee and/or IDS certification are not required and are therefore not being submitted. It is kindly requested that an Examiner-initialed copy of the enclosed supplemental IDS be provided along with the next communication, so as to confirm that the references listed therein have been entered into the record and considered.

V. Conclusion

Overall, the cited references do not singly, or in any motivated combination, teach or suggest the claimed features of the embodiments recited in the pending independent claims, and thus such claims are allowable. Because the remaining claims depend from said allowable independent claims, and also because these dependent claims include additional limitations, such dependent claims are likewise allowable. If the undersigned attorney (Dennis M. de Guzman) has overlooked a relevant teaching in any of the references, the Examiner is requested to point out specifically where such teaching may be found.

In light of the above amendments and remarks, it is respectfully submitted that all pending claims are allowable. Therefore, it is respectfully requested that the Examiner reconsider this application and timely allow all pending claims. The Examiner is encouraged to contact Mr. de Guzman by telephone to discuss the above and any other distinctions between the claims and the applied references, if desired. If the Examiner notes any informalities in the claims, he is encouraged to contact Mr. de Guzman by telephone to expediently correct such informalities.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,  
SEED Intellectual Property Law Group PLLC

/Dennis M. de Guzman/  
Dennis M. de Guzman  
Registration No. 41,702

DMD:wt

701 Fifth Avenue, Suite 5400  
Seattle, Washington 98104  
Phone: (206) 622-4900  
Fax: (206) 682-6031

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